

## CLAIMS:

1. A coating solution comprising a polysilazane having a Si-H bond, a diluting solvent, and a catalyst.
- 5 2. The coating solution according to Claim 1, wherein petroleum solvent, an aromatic or alicyclic solvent, an ether, a halogenated hydrocarbon or a terpene mixture or a mixture of those solvents is used as the diluting solvent.
- 10 3. The coating solution according to Claim 2, wherein a paraffin type solvent, a mineral spirit, terpene mixtures or an ether or a mixture thereof is used as the diluting solvent.
- 15 4. The coating solution according to Claim 3, wherein dibutyl ether, dimethyl ether, diethyl ether, polyglycol ether or tetrahydrofuran or a mixture thereof is used as the diluting solvent.
- 20 5. The coating solution according to any one of Claims 2 to 4, wherein the diluting solvent further comprises one or more of solvents selected from xylene, methylcyclohexane and ethylcyclohexane.
- 25 6. The coating solution according to any one of Claims 1 to 5, wherein the concentration of the polysilazane having a Si-H bond is 0.1 to 35% by weight.
7. The coating solution according to any one of Claims 1 to 5, wherein the concentration of the polysilazane having a Si-H bond is 0.5 to 10% by weight.
- 30 8. The coating solution according to any one of Claims 1 to 7, wherein the catalyst is contained in an amount of 0.01 to 30% by weight based on a pure polysilazane content having a Si-H bond.
9. The coating solution according to any one of claims 1 to 8, wherein the catalyst is an N-heterocyclic compound, an organic or inorganic acid, a metal

carboxylate, an acetylacetona complex, fine metal particles, an peroxide, a metal chloride or an organometallic compound.

10. The coating solution according to any one of claims 1 to 9, wherein the

5 polysilazane having a Si-H bond is an inorganic polysilazane synthesized by reacting  $\text{SiH}_2\text{Cl}_2$  with a base to form an adduct of  $\text{SiH}_2\text{Cl}_2$  and then reacting the adduct of  $\text{SiH}_2\text{Cl}_2$  with ammonia.

11. The coating solution according to any one of claims 1 to 9, wherein the

10 polysilazane having a Si-H bond is a polysilazane synthesized by reacting  $\text{SiH}_2\text{Cl}_2$  and  $\text{CH}_3\text{SiHCl}_2$  with a base to form adducts of  $\text{SiH}_2\text{Cl}_2$  and  $\text{CH}_3\text{SiHCl}_2$  and then reacting the adducts of  $\text{SiH}_2\text{Cl}_2$  and  $\text{CH}_3\text{SiHCl}_2$  with ammonia.

12. Use of the coating solution according to any one of the claims 1 to 11 for the

15 coating of surfaces of a base material to enhance the anti-corrosion, abrasion resistance, anti-fouling properties, easy-to-clean properties, wetting properties to the water, sealing effect, chemical resistance, anti-oxidation, physical barrier effect, heat resistance, fire resistance, low shrinkage, UV-barrier effect, smoothening effect, durability effect, antistatic properties and anti-scratch

20 characteristics of the surfaces of the base materials of products or articles.

13. Use according to claim 12, wherein the coating solution is applied to the surface of the base material in combination with a primer.

25 14. Use according to claim 12 and/or 13, wherein the surface has been coated with laquers, varnishes or paints prior to the application of the coating solution.